THE LOCATION

AMUSEMENT & MUSIC OPERATORS ASSOCIATION

March 1984

Coin-op Computer Friendly Part II
page 16

LOCATION Exclusive
Conversion Kits and Depreciation
page 13

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March 1984, Volume 20 Number 3

THE LOCATION

The official publication of the Amusement and Music Operators Association.

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Location At A Glance

AMOA ON THE MOVE
AMOA Accepts White House Invitation 4
Additional Location Subscriptions Now Available 6
Industry Profile 8
Expo '84' Returns Home 10

FROM THE EDITOR 6

ON BUSINESS
How To Win the Conversion Kit Game 13
by James L. Harfield and Thomas R. Janus
Is Raster Dead 15
by Todd Erickson
Computers: COIN-OP Friendly Part II 16
by Dorothy Collins

INDUSTRY WATCH
The Do-It-Yourself Tax 28

COMMENT
Keep It Simple 29
by Ben Hutchins, Jr.

AROUND THE STATES
Kallsen Retires, Sandler Takes Over as Executive Director of M.O.M. 30
AMOA Alert 30
Connecticut Video Lottery Turned Down 31
Oregon Adopts Depreciation Schedule 31

CIGARETTE VENDING
Cigarette and Tobacco Taxes 32

INTERNATIONAL
Talks of World's Largest Kiddie Ride Company to Form in U.S. 32
Japan Plans New Law for Protection of Computer Software . . 32
Malaysia Formalizes Ban 33

CALENDAR OF EVENTS 33
UP-TO-DATE by EAR 34

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AMOA ON THE MOVE

AMOA Accepts White House Invitation

AMOA Executive Vice President, Leo Droste, received an invitation on behalf of President Reagan, to attend a meeting with the Small Business Legislative Council. The council is appointed as an advisory body to the President of the United States.

Mr. Droste accepted the invitation for AMOA and attended the meeting this past January at the Old Executive Office Building on Capitol Hill.

The Small Business Legislative Council (SBLC) is a seven year old coalition of Trade and Professional Associations, that performs political functions by focusing small business legislative action where it will do the most good.

Its purpose is to maximize and influence the strength of small business on legislative and Federal policy issues of importance to the entire small business community.

During the meeting, AMOA was inducted as a member of the Council and for the rest of the day, Mr. Droste was the guest at various speaker programs led by Capitol Hill Officials and SBLC officers. ■

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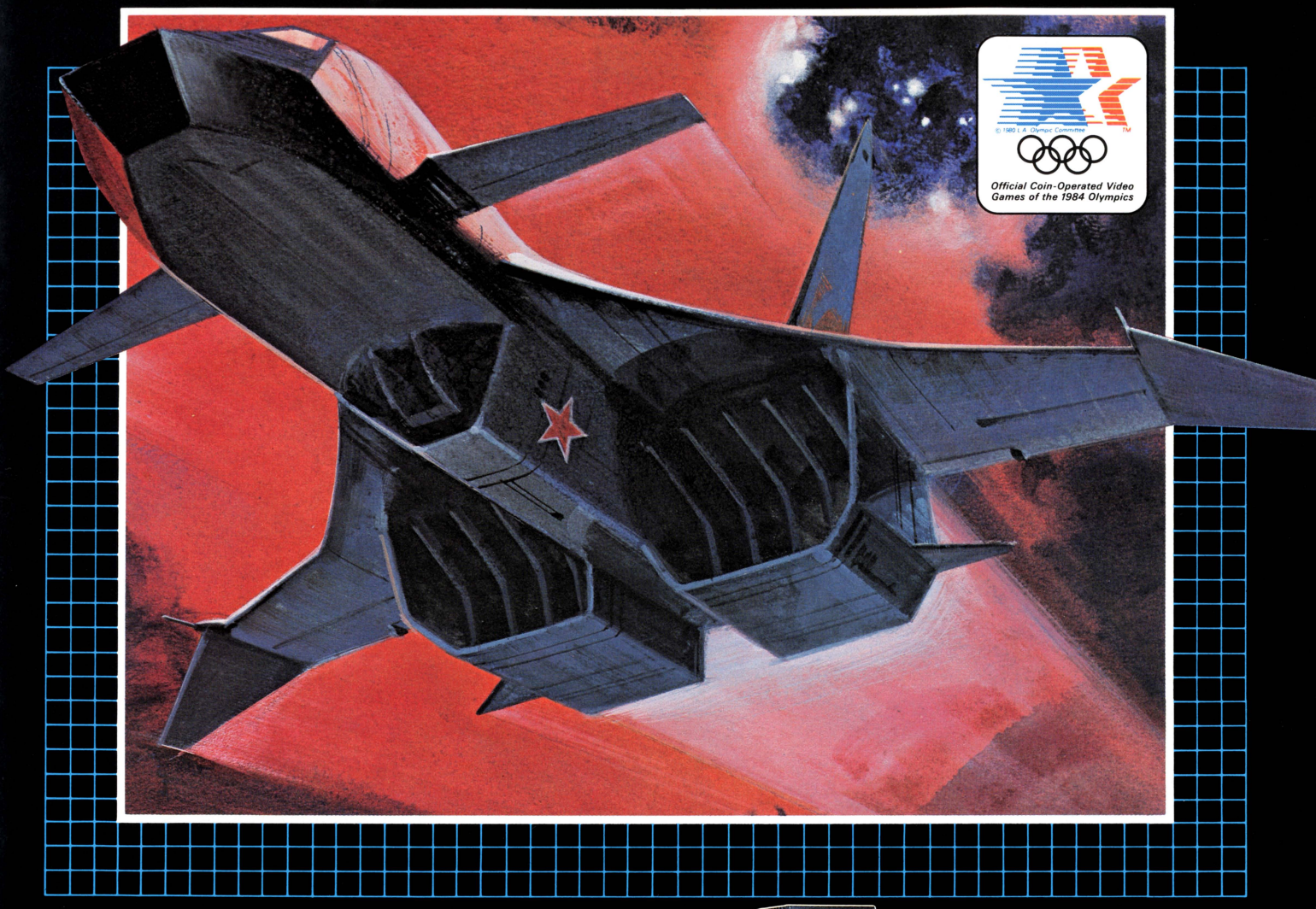

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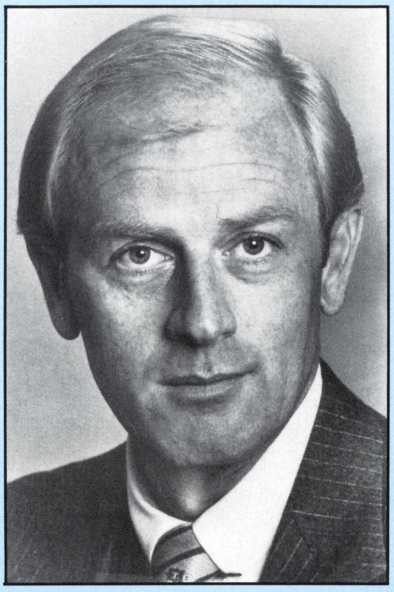
FROM THE EDITOR



"Let them be honest, and thereby evade the scrutiny of the myth makers."

Unpublished work 1981

Mark Hensley, April 13, 1953–January 6, 1984

We have an asset that few other industries have.

We have the advantage of being kept informed of the internal happenings of our industry—and things outside of it, unlike many others.

Operators know more about the general course of issues and information than just about any other segment of businessmen and women in this country and certainly more than most other countries where very few seem to know anything about anything and even then quite often it is still only what someone else (or some authority) felt they should know.

We stand very much in a special place due to the nature and professionalism of our trade press.

They work hand-in-hand to accurately inform . . . now. Not tomorrow, but now.

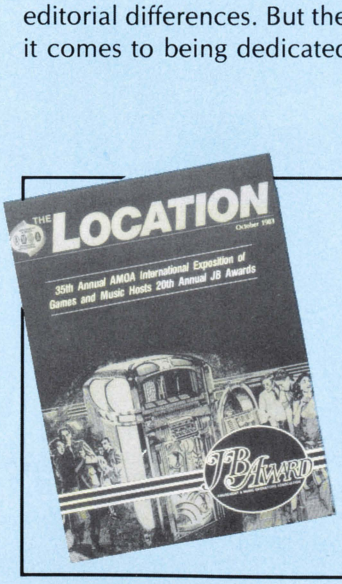
The big five, listed alphabetically, CANADIAN COIN BOX, CASH BOX, PLAY METER, RePLAY, and VENDING TIMES have placed this industry in an enviable position. Little is done effecting this industry . . . anywhere . . . that is not explored, analyzed and reported in a way that best serves the operator.

Yes, there are differences between them, including editorial differences. But they all remain the same when it comes to being dedicated to a free, accurate flow of information . . . they are not "myth makers" . . . they are to be commended and supported in their efforts. We all depend upon them.

There is a discrepancy, however, while we as an industry are amazingly well informed internally, the rest of the world is just as amazingly uninformed about us. That too is changing. Our trade presses have made themselves very sensitive to the fact that what they print for industry use can and does get distorted and misused when placed in the uninspired or naive hands of those external to our industry.

Recently, and in a couple of cases not so recently, publications have joined the ranks of those doing their best to inform operators on issues. The DRA PRICE GUIDE which carries succinct editorials by Ozzie Truppman, MARKET PLACE and STAR TECH JOURNAL (long established in the field) specialize in specific information of a business or technical sense, QUICK SILVER in Canada and GAMES PEOPLE on the West Coast (both of which are newer general interest magazines), are all part of the operators' business assets because of the environment of information they give him.

Yes, we may still measure our industry more by crises than by the normal chunks of days, weeks and years that other industries' seem to go by, but man, you are not going to see many sunrises unless you look at the horizon . . . so remember your trade presses and support their efforts to inform you. ■


THE LOCATION
October 1983
35th Annual AMOA International Exposition of Games and Music Hosts 20th Annual JB Awards
JB AWARD

Additional LOCATION Subscriptions Now Available

AMOA member companies in the U.S. and Canada, may now contact headquarters and subscribe to additional copies of the LOCATION magazine.

The subscription fee is $15.00 per year for *each* additional subscription you want and becomes effective as of the next month after you subscribe.

Send $15.00 for each subscription wanted to AMOA, 2000 Spring Road, Suite 220, Oak Brook, IL 60521 along with the person and address you want it sent to. ■

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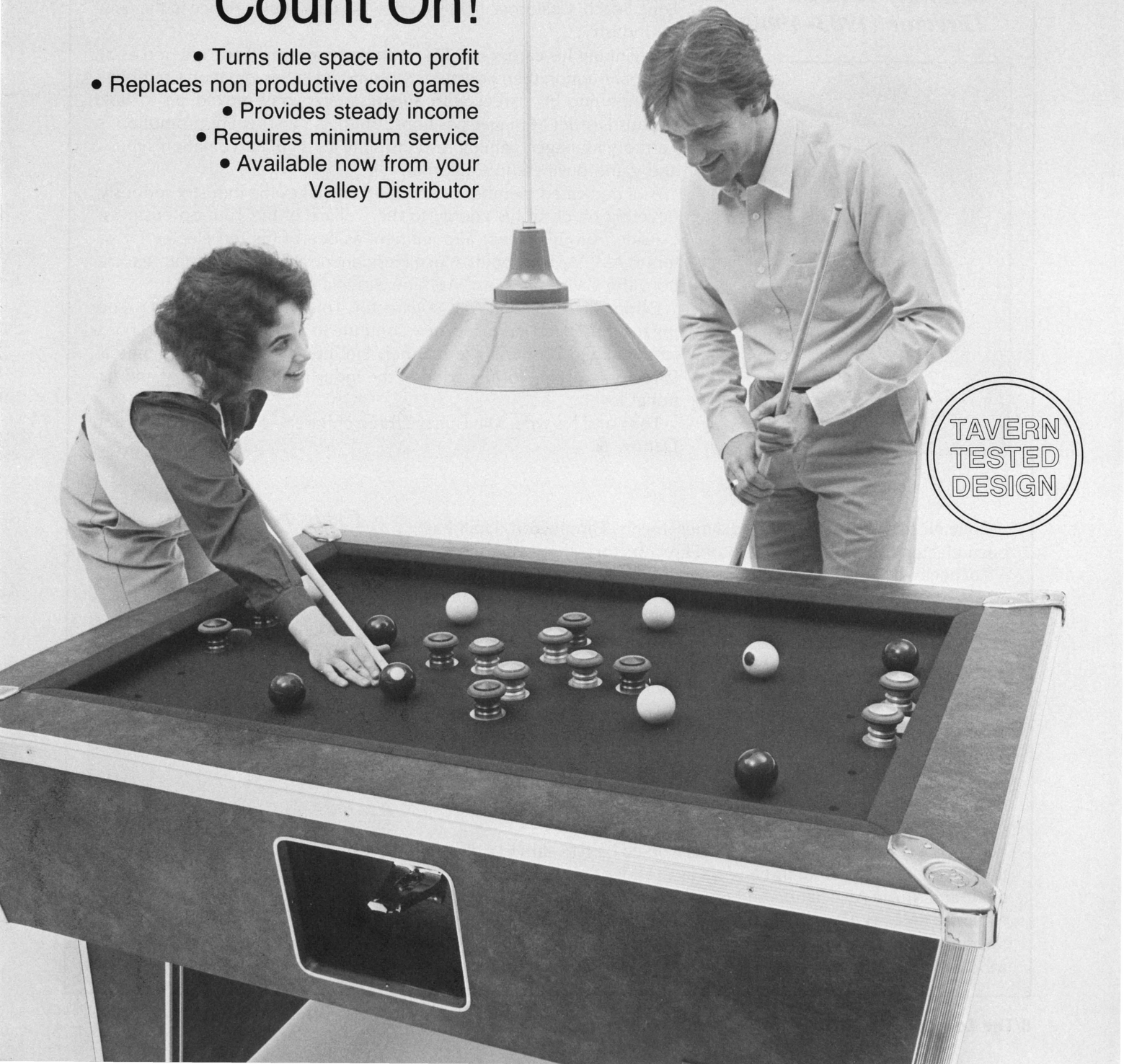
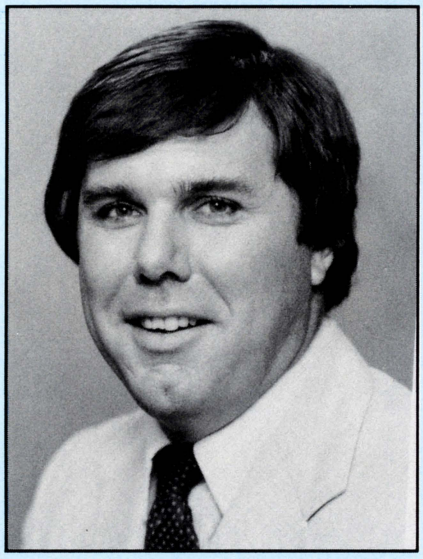


AMOA ON THE MOVE

Industry Profile

Anthony Alvarez
Director (1983–1986)



"Tony" Alvarez, Territory Manager for the Servomation Corporation, Long Beach, California, lightly carries 14 years of experience in the coin-op industry.

Beginning his career in 1971, with Servomation, Tony entered as an Internal Auditor, then was quickly promoted to Servomation Controller.

Continuing his career with Servomation, Tony moved on to hold various District Manager positions, until his most recent promotion to Territory Manager, gaining responsibility for all of Servomation's music and game business in California.

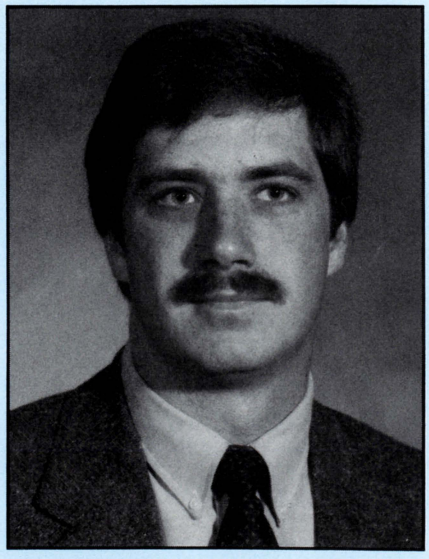
As a dedicated member of AMOA, Tony takes the industry seriously, devoting much of his energy to the welfare of the coin-op business.

Aside from his recent appointment as one of the ten elected Directors to AMOA, Tony holds a Vice President position with his state association, the California Coin Machine Association.

During his term as an AMOA Director, Tony is looking forward to seeing the music and game industry continue to mature and grow in a professional and business like manner. He intends to devote his time as Director, working for the good of the industry on both a local and national level.

Tony and his wife, Mavis, have three children—Kristen, Tony Jr., and Danny. ■

Craig N. Johnson
Director (1983–1986)



Craig N. Johnson of Westworld Amusements, Farmington, Utah has been elected to the AMOA Board of Directors for a three year tenure.

To begin, "Craig" will become part of the Education Committee and has already started to survey his state association members for ideas and input for The Education Seminars for Expo 84 when the show returns to Chicago after its highly successful forray into New Orleans last year.

Craig has worked his way up to General Manager after a 10 year tenure with Westworld Amusement, a subsidiary of the Lagoon Corporation which was formed in 1973 as a street route and shifted into game room operation in 1974. In 1975 the street route operation was dropped to allow the company to focus its energies on expansion of its game rooms concept.

Craig foresees diversifying the current set-up to once again include street operations.

Craig is a coin-op professional and has worked hard to earn that distinction, first by contributing three years as President of the Utah Amusement and Music Association and now by bringing that expertise to the National industry forum, AMOA.

Craig and his wife Diane are looking forward to being able to contribute what they can to the furtherance of the goals of our industry. ■

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AFTER YEAR

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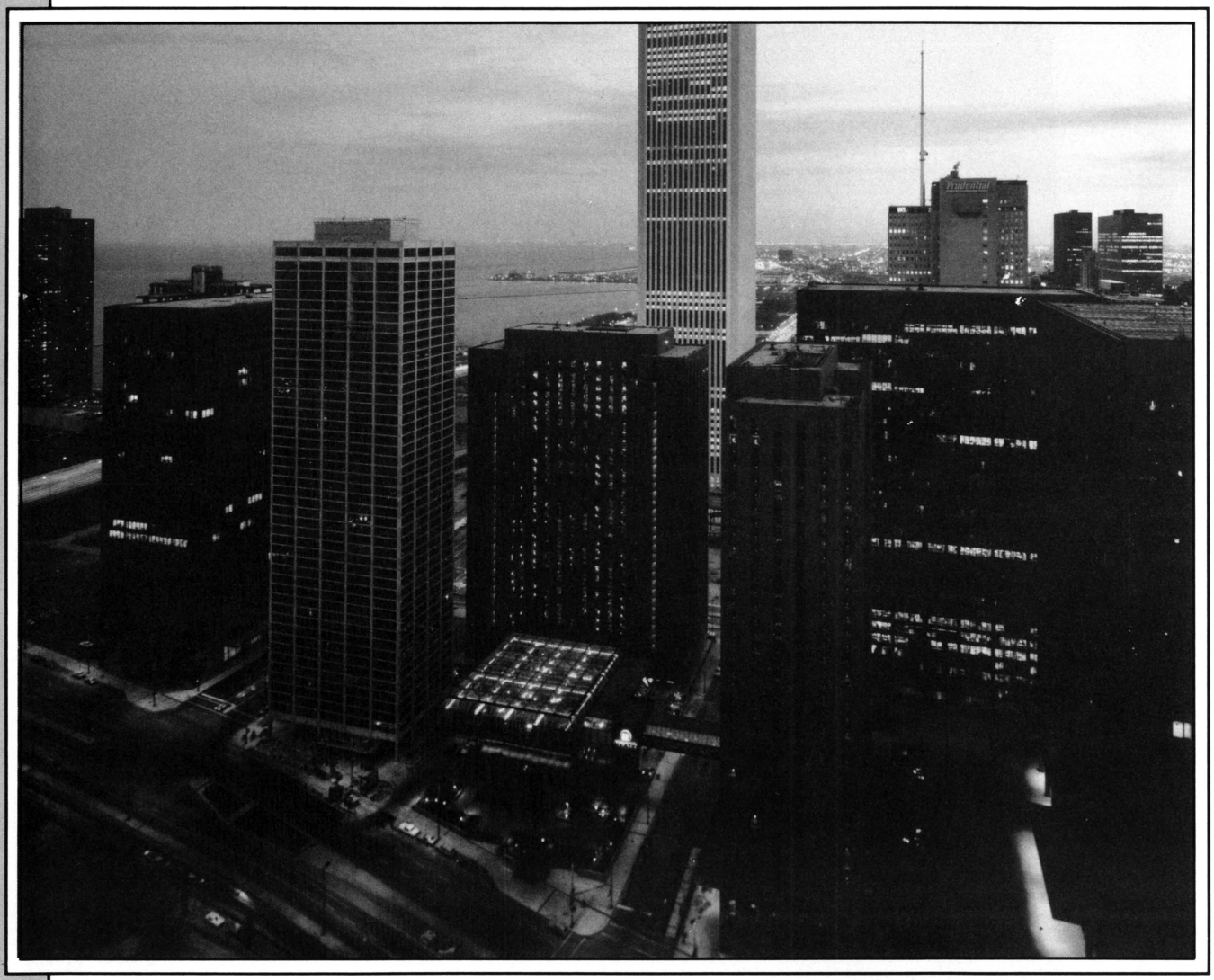
AMOA ON THE MOVE



Expo '84 Returns Home For the Industry's International Exposition Of Games And Music

Mark your calendar now for October 24, 25, 26 and 27 for the world's most effective industry trade show.

For the first time in years we will have the advantage of a venue designed to meet the needs of exhibitors and attendees.

In previous years we have had to rely on planning and contracting that was done before videogames changed the pace and face of the coin-op business.

This year at the Hyatt Regency Chicago the design is for free traffic flow and the exhibitor booth layouts have been specifically designed to eliminate pillars from the exhibit booths.

The 24th of October has been set aside for a full day of Education Seminars designed to meet operator information needs. Each succeeding day will see at least a half day of industry intensive seminars cast in the successful format set down by the AMOA Education Committee for the '82 and '83 shows.

'84 Expo Show Sold Out

Option notices for the '84 Expo have been returned—and once again, the industry's show looks to be sold out with exhibitors promising even more exciting equipment to capture the operators' and the players' imagination.

Booth assignments have already begun on a schedule earlier than ever before. Thus allowing more time for planning and production of booths that will show off the state-of-art magic AMOA exhibitors have come to be known for.

With the increased exhibit space available this year, AMOA will be able to accommodate more first time exhibitors, thereby exposing attendees to an even greater variety of innovative equipment and ideas.

Hyatt Regency Chicago Set Amidst Largest Downtown Development In Nation

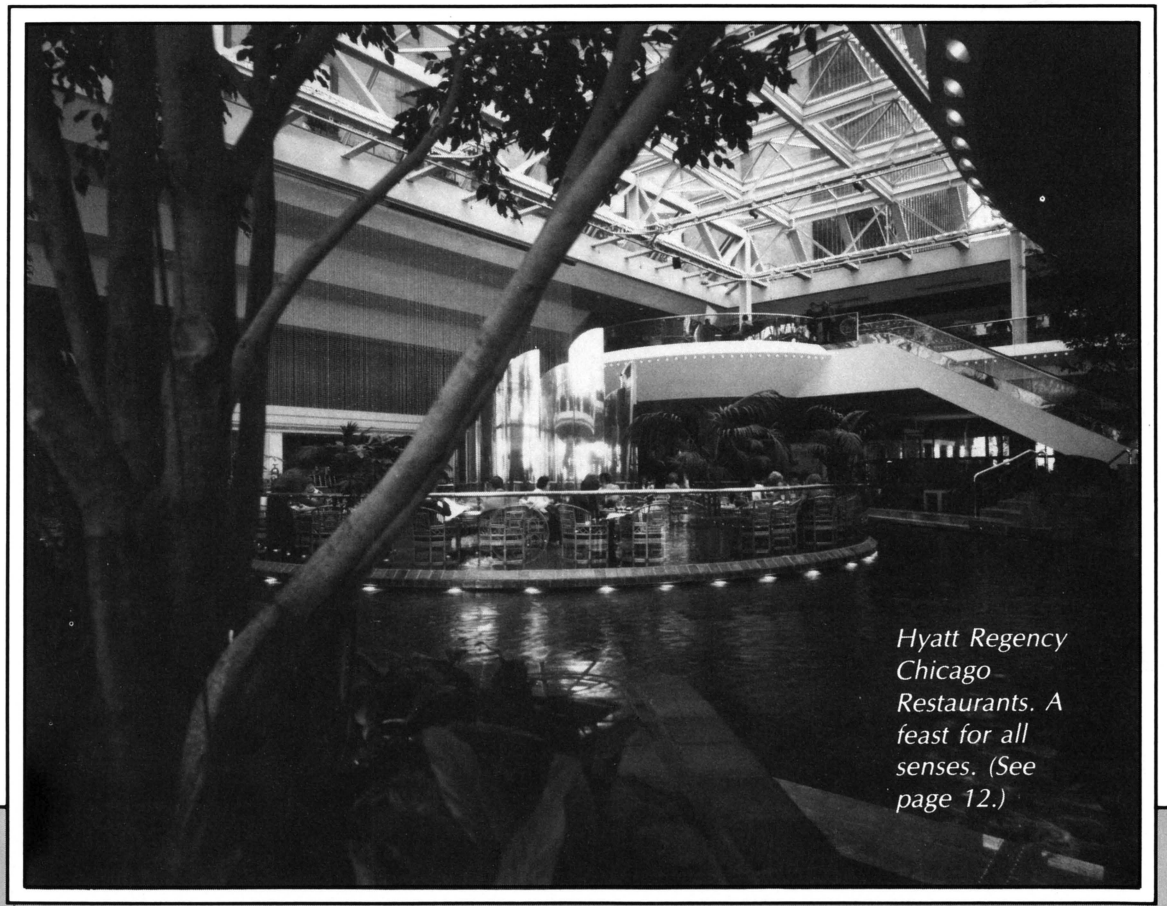
Hyatt Regency Chicago is an integral part of the largest urban development project in the nation, Illinois Center, construction of which began in 1969 and is projected to be completed in 1989. The $2 billion, 83-acre project is located on the site originally planned for the Illinois Central Railroad depot and terminal facilities, an area bounded by Michigan Avenue, Grant Park, Lake Michigan and the Chicago River.

One of the nation's largest building firms, Metropolitan Structures, and Illinois Center Corp., an IC Industries Company, purchased the land in a joint venture, planning to transform the obsolete rail yards into the current spectacle of a multi-level mix of offices, retail stores, apartments, condominiums and hotels set amidst a framework of parks, plazas and beautiful harbor vistas.

Upon completion, Illinois Center is expected to offer 10 million square feet of office space, 1.25 million square feet of retail space, 15,000 residential units and 4,500 hotel rooms. The complex, which is linked to Chicago's "Magnificent Mile" and the Loop, is expected to eventually have a daytime population of 65,000 and a residential population of 35,000.

More than half of the 83 acres will be devoted to parks, plazas and

(Continued on page 12)



Hyatt Regency Chicago Restaurants. A feast for all senses. (See page 12.)

AMOA ON THE MOVE

Host Hotel For Expo '84:

Hyatt Regency Chicago Ranks As One Of Largest Luxury Convention/Exhibition Hotels In U.S.

Hyatt Regency Chicago ranks as one of the largest luxury convention/exhibition hotels in the U.S.

The twin-tower hotel boasts 2,033 guest rooms; 185,000 square feet of meeting/exhibit space; nine food and beverage facilities; and access to Illinois Center, the nation's largest urban retail, commercial and residential development currently under construction.

A glass-enclosed skyway connects the hotel's two towers, leading to a four-story, half-acre, glass atrium lobby adjacent to both. The lobby, encircling a 4,000 square-foot lagoon, houses three restaurants, a cocktail lounge and computerized guest registration services.

Meeting and exhibition space is located below the plaza level and is inter-connected by an underground walkway. A 24,500 square-foot Grand Ballroom, designed for division into six separate function areas is the largest in the Midwest. An additional 30,000 square feet of meeting and exhibit space is available on the same level, and 70,000 square feet of pure exhibit space one floor below.

All 2,033 guest rooms in both towers feature oversized baths, color television, full-length movies, direct dial telephones, individual climate control and AM/FM clock radios. A "Flying Kitchen" in the East Tower—a high-speed elevator equipped with onboard heating and refrigeration units—provides prompt 24-hour room service.

Hyatt Regency Chicago Restaurants A Feast For All Senses

Nine restaurants and lounges in Hyatt Regency Chicago offer guests a range of dining experiences designed to tantalize every taste.

Located in the hotel's East Tower Glass House lobby are:

—STETSON'S, specializing in steak, duck and lobster, serves lunch and dinner in a rustic atmosphere which accents wood, etched glass design and brass accessories. Special features include an adjoining elevated island bar with wood floor and an exhibition cooking area with a brass hood rotisserie.

—SCAMPI is located on an island in the middle of a 4,000 square-foot lagoon, is a round-the-clock restaurant featuring northern Italian cooking and seafood. Its cafe-like decor and stratified atmosphere radiate two ambiances: refreshing expansiveness in the glass atrium seating, and intimacy in the upper level, circular booth seating.

—THE SKYWAY offers a light fare for breakfast and lunch on the garden-like, glass-enclosed bridge between the twin towers. The restaurant is a perfect meeting place for afternoon cocktails or tea.

—RUMOURS, Hyatt Regency Chicago's relaxing multi-level lounge—overlooking the entire lobby—is decorated in rich green tones with lighted, Italian glass tables, brown furnishings and accents of brass. Access from the lobby level is via a unique, curved ramp.

—THE PLAZA LOUNGE, an intimate wine bar adjacent to the lagoon in the atrium lobby seats small parties amidst a relaxing atmosphere of greenery and waterfalls.

Patrons of Scampi, Rumours, and The Plaza Lounge may enjoy live musical entertainment 21 hours a day in the lobby area.

Also at Hyatt Regency Chicago is TRUFFLES, the award-winning specialty restaurant located on the second level of the West Tower that serves fresh fish, veal creations and beef in a casual, yet sophisticated atmosphere; MRS. O'LEARY'S delicatessen and bar offering authentic ethnic dishes reminiscent of turn-of-the-century Chicago; CAPTAIN STREETER'S, serving breakfast and lunch weekdays, and Sunday champagne brunch in spacious, sun-lit surroundings on the main lobby level; THE CONSERVATORY on the main lobby level, which serves special salads and hot luncheon entrees on weekdays amidst a garden-like glass-enclosed room, and the MIDWAY LOUNGE—suspended between the lobby and the second level.

Downtown

(Continued from page 11)

open areas, while approximately 19 acres will be occupied by buildings. A pedestrian concourse beneath the plaza level presently links the entire development, and provides a wide range of dining and shopping opportunities. A pedestrian mall is planned, as well as a multi-level transit and automobile network and a four-acre, landscape riverside esplanade along the entire northern boundary of the Center to provide direct access to the lakefront.

Structures currently completed on the project include: One, Two and Three Illinois Center office buildings, the Standard Oil Building, Harbor Point condominiums, the Columbus Plaza apartment building and the Hyatt Regency Chicago. Two previously built structures also included a part of the Center are: The Prudential Building and Outer Drive East Condominiums.

How To Win The Conversion Kit Game

By: James L. Harfield
and
Thomas R. Janus

(This very timely conversion kit article is an exclusive to the Location*)*

What happens when "Pac Man" stops eating quarters? Or when the video race car stalls due to an empty gas tank? The successful videogame operator knows the answer: It's time for a new game.

Because of the many new and different games being introduced, the operator must have the financial resources available to keep his game room or street locations up to date. But with some new games costing in excess of $4,000, most operators can't afford the turnover of videogames they would like.

To combat the costly turnover problem, less expensive "conversion kits" are now on the market. Simply put, these kits allow the operator to change just the "insides" (programs, chips, wires, etc.) of the videogame, leaving its structure intact. For $500, a "Frogger" can give birth to a "Donkey Kong".

The Accelerated Cost Recovery System (ACRS) unjustly dictates a five-year life for games using the following depreciation percentages, for years 1 through 5—15%, 22%, 21%, 21%, 21%. Think about this: Does the operator have a valid argument that a conversion kit should be depreciated over a three-year period or possibly even expensed in the year of purchase?

Assets that have a useful life in excess of one year constitute capital expenditures and must be depreciated over their useful lives. The accounting theory behind this principle is that current revenues should match or be offset by the expenditures they generate for a proper determination of net income. Therefore, assets should be expensed over the years in which they generate revenue.

In determining the useful life of a conversion kit, the economic or obsolescence aspects, such as competition, consumer preference, and technological changes, are the important factors. The competition between manufacturers to increase their market share is fierce. Customers like the challenges of new games, video graphics and sounds. The operator must have the latest games to meet the changing demands of the consumer.

In the past, the operator would not replace a "dying" game for 3 years or more because of the high price tag on new games. However, the less expensive conversion kit gives the operator the financial flexibility to change a game that was a bomb to start with or became unprofitable because of changing customer preference.

(Continued on page 14)

Conversion Kit

(Continued from page 13)

Unfortunately, operators cannot look into the future to see if a new videogame created by a conversion kit will be obsolete in less than a year. Since the determination of the game's useful life must be made *before* it is placed in service and since most videogames tend to generate revenue over a 3-year period, the conversion kits should be capitalized—not expensed—in the year of purchase.

Are the conversion kits unjustly locked into a 5-year useful life because of the ACRS? NO!! The election of the "income forecast method" (IFM) gives the operator the key to proportionately depreciate the conversion kit over the years (minimum of 3) that it generates income.

James L. Harfield

Expressed as a formula, depreciation out under IFM is computed as follows:

$$\text{Cost} \times \frac{\text{Current Years Income From Asset}}{\text{Total Estimated Income From Asset}}$$

For example, if it is estimated that a $500 conversion kit will generate revenues of $5,000, $3,000, and $2,000 over years one, two, and three, respectively, the depreciation under IFM and ACRS would be calculated as follows:

	IFM Calculation	IFM	ACRS	Diff
Year 1	$500 \times \frac{5,000}{10,000} =$	$250	$ 75	$175
Year 2	$500 \times \frac{3,000}{10,000} =$	150	110	40
Year 3	$500 \times \frac{2,000}{10,000} =$	100	105	(5)
Year 4		-	105	(105)
Year 5		-	105	(105)
	Total	$500	$500	$ -

If an operator purchases 20 conversion kits in year one, his first year's depreciation under the income forecast method on those assets would be $3,500 (20 x $175) greater than his first year's depreciation under ACRS.

Note that the investment tax credit (ITC) claimed on assets depreciated under IFM, as opposed to assets depreciated under ACRS, will be smaller because the ITC is computed under the old law. However, since most videogames are disposed of before their 3-year useful life expires, the increased ITC on ACRS assets would eventually be recaptured.

Operators should keep track of conversion kits that are replaced in the first or second year of their 3-year useful life. When a kit is physically abandoned, a loss may be deducted measured by the undepreciated cost of the asset at the time of abandonment. Therefore, operators could expense the entire cost of the kit if the abandonment occurs during its first year of use *and* before the operators' taxable year end.

To qualify for the abandonment loss, the operator's intention irrevocably must be to discard the kits so that it neither will be sold nor transferred to a spare parts account. ■

James L. Harfield, C.P.A., is an audit partner in the accounting firm of Blackman, Kallick & Company, Ltd. His professional practice centers on closely-held businesses, including many in the amusement operator industry.

Thomas R. Janus, C.P.A., M.S.T., is a senior tax accountant for Blackman, Kallick & Company, Ltd.

Tax Hotline For AMOA Members

The accounting firm of Blackman, Kallick & Company, Ltd., in cooperation with AMOA, has established a HOTLINE for LOCATION readers who have questions concerning conversion kits and depreciation. Call Jim or Tom at (312) 782-3424.

Is Raster Dead?

By Todd Erickson

(Editor's note: Todd Erickson, Summit Amusement, St. Paul, Minnesota, who has always done a commendable job of observing and reporting on the industry—most notably for Star Tech Journal*—has joined the* LOCATION *for periodic commentary)*

At the AMOA show in New Orleans all the talk was about the new laser games. They will, undoubtedly, become an important part of the industry. Much must be learned about them and how to get the right interaction between player and machine.

The video industry went into a big boom in the early 1980's. Everyone seemed to think that the high income would last forever. This business is cyclic. *Foosball* has come and gone and now is returning. The same holds true of pinballs. During the boom, many games got played that wouldn't go today. The boom is over and this means we should be more selective in what we buy. Return on investment will dictate how good a game is. Raster games (or non-laser) can be divided into three types today. The first is the kit. It may come in several forms. Enhancement kits such as *Pole Position II* is a fabulous re-do of basically the same game. The additional tracks will about double the income of the game. Changing the speed up or down are also examples of enhancement. Software changes, such as *Quix* and *Zoo Keeper* are the next type of kit. They are normally inexpensive. Complete kits such as *Donkey 3, Mario Bros., Champion Baseball,* and *Cloak & Dagger* are going to be very popular in the next year. All these games are easy to install and have excellent earning in relation to their cost, installing them in a dead game is so natural.

Complete dedicated games are the next type of game. In today's soft market, a game must be superb to sell. *Pole Position I* is the best example of this today. The game was manufactured for almost a year without a closeout. After all the closeouts in this past year, it will be difficult for manufacturers to sell even excellent games at full price.

Next, is the exotic raster. This will include the mass memory games, which will become common as the price of ROM's drop. TX-1 by Namco/Atari was on display in the Atari booth at AMOA's Expo. This is the leading edge technologically. The game has three screens. This game produces a true sense of driving.

The big advantage to this game is the game play and the bonus system. The game starts out on track one. If the checkpoint is made in a specified amount of time, the game continues in the track, giving two more tracks. This continues twice more, terminating with eight Grand Prix tracks. With this much variety, the game should have tremendous longevity. The three screens will initially attract a lot of attention. With the massive hardware package, it is my understanding that there is a good possibility that additional software could be sold for this game, making it anything from a motorcycle game to a boat race, or a combination of both. The arcades need a big draw piece like this that can be converted to other games in time.

Non-laser is far from dead. This industry needs a variety of equipment, from low priced kits to the exotic games like TX-1. More game statistics and adjustments in software are becoming a necessity to achieve maximum income from games. ■

COMPUTERS: COIN-OP FRIENDLY PART TWO

In the February issue of the LOCATION magazine, we discussed the value of the "needs assessment." If you conducted a needs assessment of your operation, and discovered that you would like to use a computer system, then you are now ready to proceed to the next step—

PURCHASING THE COMPONENTS OF A COMPUTER SYSTEM

The Components of a Computer System

Now that you have a basic understanding of what a computer system can do for the amusement & music operators, we will attempt to explain some aspects of the various components that work together within the system. This will assist you, the buyer, to gain some insight into the vast array of **software** and **hardware** available.

The first, and single most important component of the computer system is software. Far too often the impulse of the buyer is to look for a computer first, and then hope to find the necessary software for it. This is not only a backward approach, it can also be financially disastrous.

Never forget that a computer system is being purchased to fill a particular need. The software is the program needed by the amusement and music operators to help organize paper recordkeeping. Therefore, the software program must fit the needs of the organization.

Once you have decided on the proper computer **programs,** then, and only then, can you begin to

assemble the various hardware components.

If you think about it for a minute, you can understand why so much emphasis on the "software first, hardware last" approach. Let's suppose that you decided to try one of those nice cheap models, the ads maintain that it is "foolproof" and "easy enough for a child to use" (that one's always a sure sign that there's trouble ahead) and it comes with its own handy, dandy **word processing** program. You buy it and learn to use the word processing program. All is right with the world . . . so you think. Then you take your computer to the office to try it out on some reports. Not only can it not do what you want it to, but you are locked into the system. No other computer manufacturer's programs will work on it, and you find that you will have to spend hundreds, or thousands of dollars to upgrade your cheapy to even begin to function at a level needed to serve your office situation. Or, as what most often happens, you will scrap the cheapy or give it to your child and begin looking at software, then hardware, as we suggest you do in the first place.

The following applications should be considered when shopping for computer programs:

1. Accounting

   The full-featured accounting software should support adequate audit trails, and controls. It must be capable of interfacing with the financial data available in the machine data file (if machine audits are required by the amusement and music operator) and accounting data base. Specific feature requirements include:

   a. Accounts receivable, including aging reports, and listing of cash receipts.
   b. Accounts payable, including vendor files, posting of expense and cash reimbursements, check posting and reconciliation, allocating expenses by categories, work programs, or centers; capacity to automatically generate checks.
   c. General ledger, financial reporting, interfacing with accounts receivable and payable, payroll; producing trial balance, balance sheets, statements of revenue and expenses; generating budget and comparing budgeted versus actual expenses.
   d. Capability for departmental or category, programs or projects, and fund accounting within each of the accounting modules.
   e. Optional payroll system interfacing with general ledger.
   f. Electronic spread sheet such as Visi Cal which enables the user to analyze trends and perform "what if" analyses, and other similar planning functions.

2. Data Base Management

   A **data base** management system can be defined as a centralized collection of data stored for use in one or more applications. Hierarchical file structures, esoteric data access methods, data redundancy, data security, and multi-terminal usage all fall within the realm of data base management systems as utilized by large organizations.

   A data base program allows the user to perform the following functions:

   a. Set up machine location files, or prospect files, by establishing a number of fields of information pertaining to specific locations, including, actual and anticipated revenue production, as determined by collections and/or market research at proposed locations.
   b. Lists customers, or prospects, in a variety of ways, either alphabetically, geographically, etc. through a sorting process.
   c. Allows for the creation of forms, such as invoices, or specially formatted reports.
   d. Allows for inspection and change of any data already entered into the system.
   e. Allows for transferring specific records to a new data base.
   f. Performs searches for specific data stored on the disk.
   g. Performs math functions, such as subtracting amounts of money paid from amount due, specified on the pre-established machine/prospect file.
   h. Provides for establishing indexes of information.
   i. Less in demand by operators, but still possible, you can send information to a printer for production of hardcopies.

3. Word Processing

   A full performance word processing program contains features for centering, boldface, proportional spacing, underlining, document assembly, automatic repagination, on-screen formatting, on-page and line number indicators, and global search and replace. Spelling, dictionary, and screen math are useful features if automatic proofreading or num-

(Continued on page 18)

by Dorothy Collins

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Components

(Continued from page 17)

erical table-handling is desired.

A typical word processor consists of three major components:

a. THE EDITOR

It is the editor that provides the primary interface to the user, allowing him to type in text and modify it as needed. Most micro-based editors operate upon a collection of text, held in the memory of the machine, and allows the user to display sections of the text on a terminal, add or insert additional text, change, delete, copy, or move existing text, and scan for selected strings.

Line oriented editors allow the user to refer to a line by either a numbering scheme or by a "current line pointer" concept. In the first case, should a user want to list the first 20 lines of his/her document, he/she might type "LIST 1, 20" or "List Lines 1-20". In the second case he/she would position an imaginary current line pointer at the top of the document, and then issue the command "LIST 20" or list the current line and the lines following up to 20 lines. There is usually a line adding or deleting command to allow the user to add, or delete, lines in specific areas of text. A scan command searches for these specific adding or deleting areas.

Full screen editors operate in a similar fashion to line editors. A group of text lines is displayed upon the screen and the user may move his cursor around at will to make changes. The screen can be thought of as a window, or as a "viewing port" on the text in memory. Using control commands, the user can move this window around, over the text in memory, allowing him/her access to different parts of the document. Commands such as searching, adding, and deleting are available.

In addition, most full screen editors have provisions for moving or copying blocks of text lines from one place in the document to another. Other commands can allow for the shifting and tabulating of text.

b. THE FILE MANAGER

Once the document has been entered into the computer's memory via the editor, a provision is needed to save it to disk or tape. The file manager within the word processing package is provided for this purpose. Commands are also available to load a document into the terminal's memory which had been previously stored on diskette or tape. Some of the more

COMPUTER GLOSSARY

Words in bold face as they first appear in the articles are defined here in this glossary.

HARDWARE—All of the various physical components of a computer system; i.e., the computer itself, the printer, the monitor, etc..

SOFTWARE—Various specific programs such as word processing, financial management, and data bases, which are either available from computer dealers or specifically written for an individual need.

PROGRAM—A set of instructions or steps that tells the computer exactly how to handle a complete problem—payroll, production scheduling, or other applications.

WORD PROCESSOR—One of many types of office automation systems. A typical unit has super and subscripts, repaging, document assembly capabilities and standard editing functions.

DATA BASE—The total mass of available relevant data which a computer can use in making decisions, calculations and displays.

JUSTIFY—To adjust exactly, as by spacing; to align a set of characters horizontally (or vertically) to right or left margins. To develop exact format or spacing in words, fields, items, or data, as designed by context of exact specifications.

CRT—Cathode Ray Tube. The television receiver or monitor that is used to display computer output.

CPU—Central Processing Unit. The central processor of the computer system. It contains main storage, arithmetic unit and special register groups.

ROM—Read Only Memory. ROM represents the internal, temporary memory storage area of a computer. When data is entered into the computer, it is stored in ROM, at which time the data can be revised and edited until the operator is satisfied with the layout or document of the text.

K—Kilo. A prefix meaning 1,000. Its abbreviation is K; e.g., 8 K means 8,000. In computer use it may also refer to the power of 2 closest to a number; e.g., 4K word memory is actually 4096 words.

sophisticated file managers will allow the user to save a portion of the memory document (lines 250–273, for instance) as a file on the diskette or to load a file from diskette as an insertion into the middle of the document in the editor's memory. Using this feature makes it easy to piece together a document from stored, pre-written segments.

One important consideration, when evaluating a file manager, is its use of a standard file format. Some word processors use a non-standard format for files, either to provide more efficiency, special purpose capabilities, or to protect the software from being illegally copied. If the file manager supports a standard file format, then the editor can be used to type in programs, as well as text documents. It may also be desirable, or necessary, to interface your own mailing list or location files, written by other software, to the word processor. Non-standard file formats can also limit your flexibility when it comes to copying files and making backups.

c. THE PRINT FORMATTER

The print formatter accepts as input your edited document (either directly from the memory of the terminal, or from the diskette or tape) and creates, as output, a typewritten paper copy on the printer. A good formatter can keep track of how many words will fit on an output line, never allowing a word at the end of a line to be divided. It can **justify** the line so that both, or either, the right and left margins appear even, it can determine the end of a page and it can automatically go to the top of the next page and print a title and/or page number.

4. GRAPHICS

A screen graphics program allows the user to represent data using graphics, including: bar, pie, and line charts; optional capabilities can include: presenting results in color, using a color monitor and/or color plotter; optional free-form graphics and design software allow the user to select from multiple colors, and to construct designs on a **CRT** video monitor.

Armed with the preceeding information and your needs assessment, you are now ready to begin shopping for the necessary programs.

When you begin investigating sources for good computer programs, which will combine to give you a total system, do not overlook the companies that sell complete systems. Sensor Based Systems in Glenview, Illinois, is only one example of such a company, which has developed a software called **"Metafile."** This program is a very powerful combination of word processing and data base management. It is designed for membership organizations as well as businesses, and allows a great deal of flexibility in designing machine, location, or prospect, records, as well as other word processing and data base tasks. Sensor Based Systems sells a total package, that is, the software and all of the hardware components needed to use the program. One advantage

(Continued on page 20)

COMPUTER GLOSSARY

RAM—Random Access Memory. This type of memory is random because it provides access to any storage location point in the memory immediately by means of vertical and horizontal coordinates. This is the read-write memory available for use in the computer. Through random access, the computer can retrieve or deposit information instantly at any memory address.

I/O PORT—Input/output entryway into the computer.

BIT—A binary digit; hence, a unit of data in binary notation. In the binary numbering system, only two marks (0 and 1) are used. Each of these marks is called a binary digit.

BYTE—A generic term to indicate a measurable portion of consecutive binary digits, e.g., an 8 bit or 16 byte.

MODEM—MOdulator DEModulator. A modem is a device that converts data from a form which is compatible with data-processing equipment to a form that is compatible with transmission facilities, and visa-versa. It enables computers to communicate over telephone lines.

BUS—A conductor or set of parallel conductors which transmit data between parts of the system.

CURSOR—A moving, sliding, or blinking symbol on a CRT, which indicates where the next character will appear.

HOME—The point of origin of the cursor.

MENU—A list of capabilities a program is able to perform.

REAL TIME—A computer mode of operation in which the input data is received and processed as it is generated as opposed to batch operation in which "old" data is processed some time after it is recorded.

FLOPPY DISKETTE—A thin, flexible platter coated with magnetic material used as a storage medium in a floppy diskette unit.

HARD DISKS—A circular metal plate with magnetic material on both sides, continuously rotated for reading or writing, by means of one or more read/write heads mounted on movable or fixed arms.

BAUD—The transmission rate which is in effect synonymous with signal events (usually bits) per second. It is used to measure the flow of serial data between computers and/or communication equipment or devices. A modem operating at 300 Baud, sends or receives 300 bits per second.

Components

(Continued from page 19)

to dealing with a systems house is that the people who are selling the software know what hardware gives the best results. There is no difference in the price of the individual pieces of hardware, as the company receives a commission on the sale of hardware, just as any other computer dealer would; so there is no need for add on fees.

When deciding on a total system, it is imperative that you go to the system dealer and request an indepth demonstration of the software and hardware. Be prepared to ask questions which will indicate whether or not the system can handle specific tasks which may be unique to your operation. Look at the user manuals, the Metafile manuals are very well written and easy to use, and refer to. Other systems may not have any, or very skimpy manuals, thus forcing you to make a phone call when you encounter a problem. **This phone cal approach is not satisfactory when deaing with an already frustrating situation.** Ask for a list of references of other people already using the system, and visit them to see first hand how these programs are being used.

HARDWARE

Now for a look at the hardware which you will need to operate your software.

1. THE COMPUTER TERMINAL

   Computers contain a series of miniaturized electronic circuits that operate by storing and transmitting electrical signals. They are capable of taking information in, storing it, retrieving it, and manipulating it. The computer has a **central processing unit (cpu)** and its associated integrated circuitry to do the "computing".

   Two types of memory are used in the computer:

   a. **ROM** (Read Only Memory) the contents of ROM cannot be changed by the user, and is generally programmed at the factory. ROM Memory contains the operating system software for the computer. In essence, operating system software is a set of instructions that tells the computer what to do when the user gives the computer a direction. It consists of a small circuit board with several integrated circuits (or chips) on it.

Some computer manufacturers put the ROM, containing the computer language, on the main computer board. It cannot be removed, thus, takes up room in the computer's memory map, whether it is being used or not. Many small computers can accept only a little over **64k's** of memory. If a ROM, with a language stored in it, takes up 16k's of memory space, that means there is only 48k of memory available for other uses. Better to have the ROM in removable cartridges so it can easily be changed when upgrading is desired.

   b. **RAM** (Random Access Memory) the average home computer will contain 16k of RAM, while a business computer often contains 64k, 128k, or more of RAM, in addition to some ROM. You can store data, or instructions in RAM, tell the computer to use the information you've stored, and then replace the material with something new. **The biggest problem with RAM is that whatever is in it disappears when the computer is turned off. If you need to save information in RAM for later use, you must store it on a disk before the computer is shut down.** Material in ROM essentially remains there forever. The amount of RAM memory can be increased by plugging in extra RAM circuit boards.

In order for information to enter, or leave the computer terminal there must be a physical area for the connection of a communications line. This connection is known as an **I/O Port** (Input/Output Port).

A port is an entryway into the computer. Data flows into and out of the computer through a variety of I/O ports. These ports generally consist of electronic circuits in a circuit board, that mates the computer with another device, via a cable, such as a printer, monitor, or disk storage system.

There are two types of ports.

a. PARALLEL PORTS

   A parallel port consists of an outlet which has a wire, or connection, for each of the eight **bits** in a **byte** of data. If you tell the computer to send information to a printer, eight bits of information are able to travel out of, or into, the computer at one time.

b. SERIAL PORT

   Serial ports are single wire outlets which only allow one bit of information to travel at a time. Telephones use serial ports, therefore, any time a **modem** is used, a serial port is required.

In order for a modem, printer, or disk operating system to access the central processing unit, it requires the use of a **"bus".**

A bus is a communications link that carries information between units of a computer. There are three types of busses:

a. Control busses transfer control signals between the control unit and other parts of the computer.
b. Data busses transfer data between units.

c. The instruction bus transfers instructions from the computer memory to the control unit.

Busses can be organized in parallel or serial fashion. Parallel busses are best suited to high-speed communication, and represent the main bus organization used on small computers; serial busses require fewer lines and are primarily intended for connecting terminals to central processing units, often via a telephone modem.

KEYBOARD

Now that you have a bit of an understanding of how the main terminal functions, it would be helpful to know how the information gets into the terminal from your documents, or wherever. This process, of inputting information is handled by the keyboard.

"A keyboard is a keyboard" you say. Well, nothing could be further from the truth. For one thing, there are attached, and detached keyboards; and for another, there are keyboards with, and without, special function keys and numeric pads.

Let's begin with the detached keyboard, since this is the author's preference.

Advantages:

1. The keyboard is purchased with the computer terminal. A few years later, the computer company introduces a new, more advanced keyboard, which you would like to use. Just unplug your present keyboard, plug in the new one, and you are in business with an upgraded system.
2. Suppose you are keying in information into your computer, and find you need more information from another document. You can move the keyboard to the document, within certain space limitations, and key in the necessary information, instead of having to move the document(s) back and forth.

(Continued on page 22)

SURVEY RESULTS

Computers used by operators who responded to the AMOA survey:

RESPONSES	COMPUTER
17	IBM Systems 34
14	Apple II or II plus
11	Digital Equipment Corporation (DEC)
11	Radio Shack Model III
6	Radio Shack Model II
5	IBM Systems 23-Datamaster
4	Apple III
4	Commodore 8032
4	Commodore PET 4023
4	IBM Terminals
3	IBM PC
3	Infotecs
3	North Star Horizon 64K
3	Radio Shack I
3	WANG
2	Beehive Intl. Micro B Display Terminal
2	Control Data
2	Cromemco
2	Facom
2	Franklin ACE
2	Southwest Technical Products S109
2	Visual Terminal
2	Radio Shack Model 16
2	SOROE Terminal
2	IBM 5110
2	IBM 5322
2	Linolex (3M)
1	ADDA Terminal
1	Commodore Vic 20
1	Validata
1	Vector Graphic Model 2800
1	Zenith
1	Osborne
1	Qantel 960
1	IBM 5120
1	IBM Model 32
1	NCR 8200

(Continued on page 23)

Components

(Continued from page 21)

3. The detached keyboard can be used at different elevations from the main terminal, such as your lap, or side table, wherever it is most comfortable for the user.

Disadvantages:

1. If the keyboard is unplugged it could become misplaced. (I cannot perceive of this ever happening but it is a remote possibility).
2. The attachment cord could become tangled with other items in the work area. (Another remote possibility since the cord is so tightly wound).

Now for a look at the attached keyboard.

Advantages:

1. The attached keyboard is always with the main terminal, ready for use.
2. You never have to worry about the cord interferring with other items in the work area.

Disadvantages:

1. If the table being used for the terminal is not at the correct elevation for the user, you must purchase another table or make some other modification in the computer station.
2. You cannot change the keyboard yourself, should you wish to upgrade. This procedure requires the services of a mechanic.
3. All documents to be keyed into the computer, must be brought to the work station. The computer should not be moved any more than absolutely necessary.

There are other, even more important considerations which should be made other than attached versus detached.

Keyboards come with or without a plastic membrane. The membrane covers the entire keyboard, thus protecting it from dust and spills. Unfortunately, the membrane prohibits fast typing, as the covered keys require a firmer touch than uncovered keys. Some computers come equipped with midget sized keyboards which also tend to reduce the rate of typing. **You should be certain that the keyboard you select has a good "feel" to it, and seems comfortable; otherwise, it will be frustrating to work with.**

Other questions to ask include:

1. Upper/Lower Case—does the computer display only upper case letters; or can it display both upper and lower case letters.
2. Special Function Keys—On some keyboards, there are special function keys that can be used to issue commands, such as reset, insert, delete, clear, etc. Computers without special function keys may require you to push two or three keys either simultaneously, or in sequence, to issue a command.
3. Special Graphics Characters—In addition to letters, numbers, and punctuation marks, some computers assign special graphics characters to certain keys. These symbols may include anything from greek letters, to other special designations the computer manufacturer has selected. These graphics characters are very handy.
4. Keyboard Layout—The keyboard should be equal to a full-sized typewriter keyboard. This will greatly facilitate the users transfer from typewriter to computer.

The Exxon QX-10 has two keyboard configurations available. (Mention of this is made to acquaint the reader with additional keyboard considerations.) The ASCII version (with 103 keys) offers a standard layout in the main typing area, ten function keys (with clear, removable caps, that allow the user to apply personal legends), four additional function keys without caps, a screen editing cluster (which consists of usual direction arrows for **cursor** control, delete, **home,** and clear) and a calculator pad of nine keys.

The second keyboard design is called the "HASCI" (for Human Application Standard Interface). It has been set up with a selectric typewriter-like layout in the main typing area.

The functions are organized into four clusters.

1. The systems controls group includes stop, help, copy disk, and undo keys.
2. The file controls are labeled store, retrieve, print, index, and mail.
3. The application section consists of **menu,** calculator, schedule, and draw keys.
4. The typestyle section allows choice of normal, bold, or italics style, and type size.

The editing and calculator pads are generally similar in layout and functionality to those on the ASCII keyboard.

THE MONITOR

Now that you have keyed information into your computers memory (RAM), it would be helpful if you could see it. This is where the video monitor comes in. And, just as the keyboards are varied, so too are the monitors. Video displays can be handled by cathode ray tubes (CRT), TV sets (either black and white or color), or floating crystalline displays, common to very small computers (particularly computerized calculators and some portable computers like the Texas Instruments Computer 40.)

The display viewing area, may be as little as one line of 40 columns as is the case with the TI-40 to as much as a full page of text, 80 columns wide and 66 lines long, as is the IBM Display Writer System.

The amusement and music operator should require a screen with a minimum visual display area of eighty columns, preferably scrolling to the right or left allowing for 132 columns; and a minimum of 24 lines which can be scrolled up or down to view a total of 250 lines. This is particularly important when doing spread sheet projections, which may extend far beyond the basic 80x24 format.

Graphics applications are much better displayed on a color monitor which can display several different colored bars rather than black and white. This is especially true when using a graphics plotter (a peripheral unit similar to a printer but which creates hard copy graphs and charts from instructions sent from the monitor).

The monitor is the center of communications for the computer. It recognizes commands from the computer's control panel or keyboard, and calls and controls other systems and user programs. A monitor may be as simple as a few hundred bytes of code that control a dozen control panel functions; or it may be a complex program with the capability of dealing with **real-time** events on a wide variety of input/output devices. Advanced monitors can allocate computer resources to several programs at one time.

Monitor functions may include any of the following:

1. Scan keyboard or terminal and identify commands.
2. Display output.
3. Assign input/output devices.
4. Control other systems programs.
5. Allocate resources to user programs.
6. Resolve priorities.
7. Determine time and date.
8. Transfer information between memory and input/output devices.

PRINTER

One of the peripheral devices the monitor sends information to is a printer.

Printers come in four different print configurations: dot matrix, letter quality, ink jet, and laser; the letter quality being the slowest and the laser beam the fastest, and also most expensive.

A printer buffer, or spooler, is a handy additional piece of hardware or software, which can keep the data you're printing in a separate memory, treeing up your computer's memory for other things.

(Continued on page 24)

SURVEY RESULTS

(Continued from page 21)

Of those responding, here is a list of what they use their systems for:

RESPONSES	USE
55	General Ledger
42	Printing Route Slips
63	Information per machine
62	Information per Location
37	ROI Analysis
16	Payroll
13	Inventory
7	Accounts Payable
6	Commissions
5	Tax forms and personal property reports
4	Accounts Receivable—Invoicing
4	Cost and Service analysis
4	Depreciation
4	History by location or machine, maintenance
4	Word Processing
3	State licensing information
3	Repairs
3	Collection data analysis
3	Cash vs. Counter route analysis
2	Forecasting cumulative and predicted performance
2	Marketing
1	Account Master List
1	Cigarette accounting
1	Coin Count reconciliation
1	Insurance Notification per machine
1	Most popular game/wk.
1	Personnel schedule

(Continued on page 25)

Components

(Continued from page 23)

A dot matrix printer uses a vertical row of wires which strike the ribbon as the printhead travels across the page. The printhead usually has either seven or nine wires which form characters from a matrix of dots, either five dots wide and seven high, or seven wide and nine high. Dot matrix fall a bit short of what most people consider "letter quality," but the industry is improving so rapidly, that this quality difference may soon disappear.

The most popular letter quality is the daisy wheel, so called because it looks like a black plastic (or metal) daisy. This little four inch diameter wheel with molded characters, on the end of each spike, constantly spins, and a solenoid strikes the correct character when it is at the 12 o'clock position. The wheels come in plastic and metal. The metal have a longer life and are more expensive. A variation on the daisy wheel is the thimble design. The striker mechanism is similar to that in a daisy wheel printer.

Generally, a letter quality printer will make better carbon copies than a dot matrix, however, a dot matrix is so fast, three hundred lines per minute, or more, that multiple original copies could be made very quickly.

A high speed printer with a print speed in the 300 line per minute (lpm) neighborhood is suitable for volumes of fifty thousand sheets per month. People who require fewer than fifty thousand sheets per month find slower printers are quite satisfactory.

An example of the difference between manual and computer is this:

A typist working at 60 words a minute, or about six characters per second (cps), can type a full page of about 250 words in a bit over four minutes. A 100 cps or 100 lpm printer ought to be able to produce the same page in about 15 seconds.

Another reason to look for a faster printer than you may think you need is that, most printers are not built for continuous duty. A 100 percent duty-cycle means operating hour after hour producing pages filled solidly with letters and numbers. Printers that run beyond their duty-cycle capabilities will suffer greatly increased malfunctions and breakdowns.

Some printers are designed to print from right to left, as well as left to right. This saves time, in that the printhead does not have to return to the left side of the page at the end of each line. In order to accomplish bi-directional printing, the printer must have a buffer to store temporarily the line that is to be printed "backwards." In general, this leads to more accurate transmittal of data, and allows the printer to proceed steadily at its own pace.

For various purposes, printers may be required to handle paper of different widths, continuous forms, multi-copy paper, envelopes, labels, etc.

Continuous feed, or tractor feed (due to the tractor like spikes on the wheels, which penetrate the holes along the sides of the computer paper) paper is available as plain sheets, pre-printed invoices, or forms, printed letterhead and envelopes. This is very convenient when processing large quantities of information.

Another optional feed device available for some printers, is an automatic single sheet or envelope handler. This allows several hundred sheets of paper or letterhead to be stacked and then fed automatically, one at a time, into the printer.

During the past two years, six dot matrix printers have been introduced capable of printing multiple colors. These use a variety of different printing techniques. One has a ribbon with the first quarter impregnated with red ink, the second quarter with yellow, the third with blue and the fourth with black. A page is printed with the first color, then the feed is reversed and the sheet is brought back to the top and printed with the second color, and so on. Another approach uses a wide ribbon with four colors on it in horizontal stripes; a ribbon positioning mechanism is used to place different colors under the printhead.

No color printer will produce an image as good as the photograph or printed picture. However, they are excellent for producing business charts and rudimentary graphics.

Ink jet printers literally squirt the characters onto paper from specially designed ink nozzles; and range in speed from 30 characters per second (cps) to 3,000 lines per minute (lpm). Characters are generally produced in the form of a dot matrix, although ink jet printers tend to use more "dots" and thus produce a slightly better result than a standard dot matrix printer. There is at least one ink jet color printer on the market. It produces a somewhat more satisfactory image than the output from dot matrix impact printers.

DISK STORAGE SYSTEMS

(Editors Note: The AMOA Survey results indicate member operators are using floppy disk systems 2 to 1 over hard disk systems).

By far, the most popular memory storage system is the magnetic disk. These are available either as **floppy diskettes** or **"hard" disks.** Cassette tape systems are also available, but are much slower than disks. The large main frame computers still use magnetic tape storage, as do some back up systems on hard disk drives.

Virtually all personal computers have compatible cassette storage systems. Programs, or data, you want to save and use again later, can be recorded on regular, good quality audio cassettes. **Cassette storage is cheap, generally reliable, and easy**

to use. Unfortunately, it is slow.

A large program can take 3 minutes, or more, to load. The computer then admits signals, or tones that tell the user when to press the cassette play or record buttons, and as the computer reads the data, it provides a sound through the television, or monitor, that lets you know everything is proceeding properly.

Floppy disk systems use small diskettes, that look like 45 rpm records, as a program or data storage medium. The diskette, which ranges in size from 3½ inches to 8 inches, slides into a slot in a disk drive. The disk drive then spins the diskette, and reads or writes information on it. **Disk drives are very fast, very reliable, and more expensive than cassette recorders.** Many business computers have built in disk drives, alleviating the need for additional equipment. The capacity of the diskettes vary according to size and type, but a great deal of data can be stored on even the smallest, least sophisticated disk drive. Floppy diskettes are able to handle up to one million (1mg) bytes of information.

Hard disks may either be "fixed" (factory-sealed within a super-clean, air-tight housing), or similar to, though much larger than, diskettes in that they can be removed by the operator. Whether fixed or not, **hard disks provide mass memory storage, far exceeding floppy disks in capacity, and speed of data transfer—and, are much more expensive.**

Hard disks come in several sizes: 5¼ inch, 8 inch, and 14 inch diameters are the most common, with the 5¼ inch disk the one usually interfaced with microcomputers. The disks, or platters, are made of aluminum, either thin-film plated, or coated, with ferric oxide or other magnetic media. Both surfaces of a platter are used to record data; hence there is a read/write head for each surface. Also, multiple platters may reside in one drive housing, thus allowing a choice of varying capacities.

To facilitate data transfer, the disk rotates at high speed (usually 3600 rpm, in contrast with a floppy disk drive's 300), so the head would

(Continued on page 26)

SURVEY RESULTS

(Continued from page 23)

Existing software packages being used by operators responding to the survey:

ACCOUNTING—Peachtree, BPI Systems, RussII; Software Dimensions, Inc., MNA General Ledger, LIBRA—General Ledger; NCR Accounting—General Ledger—cash receipts—depreciation; Quantel general ledger & payroll, Radio Shack VisiCalc Personal Software, Inc.

DATA BASE MANAGEMENT—DB-Master—Stone Ware Micro-Puter Products; Disc-Data Intelligence, Cambridge, Ma.; GAMES (General Amusement Evaluation System); Radio Shack Tracking Machines; RDBMS Package "Condor" for equipment inventory, Validata—Montgomery, Al.

WORD PROCESSING—IBM Easy Writer; VisiFile; Radio Shack "Scripsit;" SuperScript, Versa Form.

FINANCIAL MANAGEMENT—Effective Management Systems; Haevold Vending Software Unlimited, 2000 W. 42, Sioux Falls, SD.; IBM Payroll; Operators Investment Analysis; Pascall Software for Business Systems; Radio Shack Payroll.

GENERAL MANAGEMENT—Applied Software Technology; CADO Systems, Union, N.J., DISC—19 Monsignor O'Brien Hwy., Cambridge, MA, 02141, Mr. Dabcoultch; Profile & Software—Radio Shack; The Manager—Canadian Micro Distributors, Ltd., VisiCorp.

For those operators responding to the survey that bought programs adapted especially for this industry, here is a list of companies:

1. ARCADE ANALYZER—Pappas-Northrup Software, 10 Falcon Place, Huntington, NY.
2. COM TECH, PCMI PACKAGE, Joe Bethancourt and Karen Tanner Programmers, P.O. Box 40515, Indianapolis, IN.
3. Effective Management Systems, Autotrol Bldg., 1701 W. Civic Dr., P.O. Box 09129, Milwaukee, WI.
4. HANSON—ITC—General Amusement Management Evaluation System (GAMES) 9201 Penn Ave. S., Suite 1, Bloomington, MN.
5. Innovative Management Consultants, 611 Larue, San Marcus, TX.
6. Mr. Phillips, President, Validata, Montgomery, Ala.

Components

(Continued from page 25)

gouge the disk if it touched it. It therefore "flies," but only about 18 millionths of an inch above the platter surface—a gap about one-tenth the size of a human hair! There is no guarantee against disaster, however, so a hard system should always have back-up storage in the form of tape, floppies or even another hard disk.

In addition to their incredible storage capabilities, hard disks can also offer tremendous savings in data-transfer times, when compared to floppy systems. Because a hard-disk drive can feed information into a computer at speeds up to 10 times faster than a floppy, hard-disk owners routinely load even exceptionally long files at lightning speed. Furthermore, the increased data access times offered by most hard disks means that despite the voluminous amount of information these units contain, hard disks can locate a file at rates equaling or exceeding floppy units.

MODEMS

"Modem" is a shortened term for MOdulator/DEModulator. The modem modulates the data from your computer to convert it into a signal that can be transmitted over telephone lines or cable television lines. A modem receiving the transmission demodulates, or reconverts, the signal back into a form compatible with the computer.

A modem is a special piece of equipment which allows the computer to be connected to the telephone for the transmission and receipt of information over the telephone line. This access is especially useful when dealing with a network information system such as the Source, CompuServe, or Dialogue, or when communicating with other computers, and main frames, located in subsidiary offices.

The modem is connected to the computer via a serial I/O port. Therefore, **it is important that your computer have both parallel and serial port capabilities.** There are several important considerations when selecting a modem.

1. **BAUD Rate**—is the speed, through which the computer can send and receive information through its serial port. A rate of 300 BAUD corresponds to a little less than 30 characters per second, and is the speed at which normal long distance phone circuits operate. Modems also operate at 1200 BAUD.
2. Full Duplex or Half Duplex—Some systems require the computers on each end of the network to take turns. That is, when one is sending, the other can only receive. The connection doesn't allow a computer to send and receive at the same time. This simple access is referred to as half duplex (or one way transmission of information). Using a system that is half duplex, requires the sending computer to wait until the receiving computer finishes recording the incoming information before the sender can access the receiving computer.

   This can lead to potential problems. Suppose you mistakenly transmit the wrong information, or wish to make a change in the data during transmission. It is impossible to interrupt a half duplex transmission once it begins.

   Full duplex, on the other hand, allows both the sender and receiver to send messages at the same time. Full duplex is capable of sending a "break" signal which is used to tell the receiver to stop receiving and wait for further instructions. Make sure that if the computer has a break key, that it is able to send a break signal. There are some computers that have non programmed break

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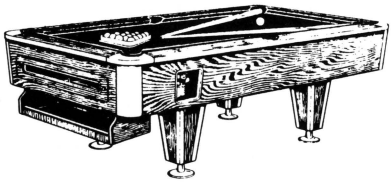

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keys which are useless.

3. Auto Answer—The standard method of connecting to a network is to dial the correct number and listen for a high pitched tone, that signals the network is ready to receive data. The phone is then placed in two sponge rubber cups on top of the modem, and the connection is made. When you call another computer, and it puts the high pitched tone on the phone line, it is operating in an auto answer mode. That is, the computer answers the phone, and sets up to receive instructions without requiring human assistance. **If you ever want to be able to access your office computer from a remote area, you will need the auto answer capability.**

The overall advantages of data communications are the rapidity of information access and transferral, the convenience and economy compared to Express Mail or courier service, and greater return on your investment in the computer itself.

In short, communications hardware and software are providing means for linking personal computers into an extensive network that spans the entire country, wherever telephones can be found.

Many operators who are considering the purchase of a computer system have expressed a certain amount of fear, considering the use of a modem. The fear is that, once a modem has been hooked up to the computer, anyone could access information, regardless of who he is. This is not necessarily true.

In order to ensure the safety of your computer data files, you must incorporate certain safety measures. One such measure is to turn off your computer system at night. This is fine, as long as you do not have a need to access information yourself, from remote locations, via the telephone. Another safeguard is to use a special code which protects your data files from unauthorized use. The use of this special code allows you to leave your computer on so that you can "call up" data files from your machine locations.

Let's look at an example of why you might want to use a modem. You have a portable computer, which you take with you to your locations, where you are able to input information, such as: 1) How many coins are taken from the machines; 2) Total revenue produced by the machines; 3) Any other information needed from particular locations. With a modem, you can put this information directly into your main computer data files, at the time the information is collected, rather than having to wait until you return to the office. This is particularly valuable if you have several locations to visit, and collect data from, before returning to the office.

Next month, we will be discussing the training of staff, networks—both communication networks and local area networks (additional terminals hooked into the main computer system), and furniture considerations. Until then, review your 'needs assessment' and start working up a list of questions for yourself and your computer sales contact. ■

FEATURES

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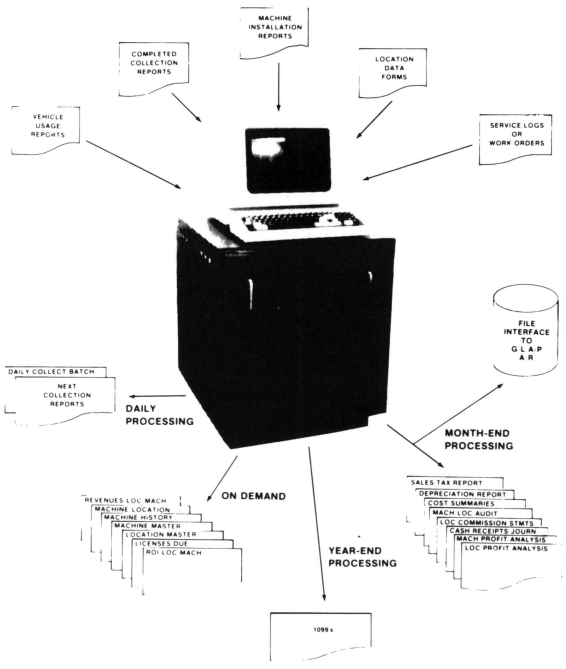

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INDUSTRY WATCH

The Do-It-Yourself Tax

Personal Property Tax #38401

(Examine this along with Industry Watch #38305)

(Editor's Note: Most states still impose a personal property tax and generally it is necessary for the property owner to file a return reporting the value of the personal property to be taxed. The taxpayer is expected to know what property is subject to tax and what the taxable value of the property will be. So, in effect, the personal property tax is a do-it-yourself tax that generates $75+ billion (for real and personal property) in revenues each year. Unfortunately, the property tax is known for its uneven and sometimes poor administration and since it can be a very costly expense of operation, it is the subject of the following Industry Watch.*)*

Problem and Issue

This tax labeled "most unfair" by taxpayers justifies another issue of *Industry Watch* since there is such unequal administration of it throughout the United States. It is that time of year when property tax returns are due, so we want readers to be aware that too little attention to this tax matter may cost them additional tax dollars later in the year when the taxes are assessed and need to be paid. Assign someone to this project of filing the return who will take pains to do a thorough job. Once a property tax bill is received, it is generally too late to complain about the amount or how that amount was determined. So file a proper return when required; carefully watching that you know what information and values to report.

Discussion

AMOA members have indicated to us how property tax valuation is determined in various areas of the country. Differences are substantial enough to warrant close scrutiny when preparing your personal property tax return.

For those operators lucky enough to be in states where no personal property tax is currently imposed, move on to the gross receipts or sales tax file and continue working with those tax matters.

In order to impose a personal property tax, it is necessary for the owner of property to file a tax return on which the value of taxable property is listed (declared). Examine or have your state statutes checked closely to determine what property values to list or declare. Incorrect reporting can result in paying incorrect, excessive taxes. If *cost, purchase price, market value,* or *declared value* are requested on property tax return, make sure the person preparing the return understands exactly what values need to be reported.

As a general rule, the values reported (whether cost, purchase price, market value, declared value or some other defined value) are subject to a percentage factor and these percentage factors vary from state to state as well as within some locations of the state. Here is an example of how these percentage factors vary:

Age Of Equipment

	1st Year Factor	2nd Year Factor	3rd Year Factor	4th Year Factor	5th Year Factor
OREGON	85%	20%	10%	X	X
VIRGINIA (City of Richmond)	60%	50%	40%	30%	20%
UTAH (Salt Lake City)	18%	16%	13%	10%	7% (5% thereafter)
NEBRASKA	70%	60%	55%	50%	45% (additional 5% each year to 20%)

NOTE: You can see from this schedule that each state has a substantially different idea of what videogame equipment is worth for property tax purposes. Equipment purchased in the current year with a cost of $50,000 would be valued at $42,500 in Oregon, $30,000 in Virginia, $9,000 in Utah and $35,000 in Nebraska.

Observation

Originally we reminded local Amusement Machine Operator Associations to challenge the factors and cost bases used to determine the assessed value on property tax returns. Some state associations have been successful in having changes made which will result in the payment of fewer tax dollars by equipment owners.

The major problem confronting virtually every taxing body is the need to determine precisely what value to assign to specific property. This is an administrative nightmare and almost an impossibility. What's the value of a videogame which may be used for a few weeks or if lucky, a few years? The valuation schedule used by the local tax official may not reflect the real value of videogames. That is why it is necessary for you to carefully determine the real value of videogames when reporting them for tax purposes.

The property tax generates more than $75 *billion* in revenue annually. Application and administration of the tax is not an exact science, so the burden has been placed on you to seek equity by starting with the filing of proper returns.

Editor's Note:

This tax represents an activity the AMOA office will closely monitor in the future so we look for and appreciate information and comments from readers. (See order form elsewhere in this issue to order sets of this and previous Industry Watches). ■

COMMENT

Keep It Simple

by Earl Hutchins, Jr.
of the Lawton Novelty Co.,
Lawton, OK

"Editor's Note"—As a matter of policy, the LOCATION will, as appropriate, provide a timely forum for industry issues and opinions from the operators' point of view.

There is an urgency in the air surrounding the coin-operated amusement machine business. During the tenure of our own coin-operated music and game business, which was established in 1931, we have always felt that when a fresh new game was needed the manufacturers would come up with it—we were never disappointed.

In the past 52 years, there have been major changes in the coin machine business every six to eight years. We have gone from pin to shuffle alley—to pool—to electronic pins—to videos, etc. Each of these changes seemed to be in step with the economy and the population growth, and were priced accordingly. The profit earning results proved this to be correct.

For the first time in our over 50 years in this industry, we feel that we are "out of step." Simplicity and service are the sources for business success.

We have watched it happen in the jukebox business, and we're seeing it now happen in the game business. We let our imagination, instead of our basic needs, dictate our mode of life. In the period from 1976 to 1983, we have witnessed an unusual state of affairs—we have had some 20 good videos that have passed the test.

In talking with people and asking questions concerning what they think it would take to get the public interested again in videogames, the answer is, "The women and the young are waiting in the wings for a comparable video to Pac Man—the men will follow."

They want a game with a catchy tune, easy to acquaint with, competitive but not exhausting, fun without tiring, limited as to playing time so as not to become boring, and priced to sell for 25¢ per game. This is our next successful game, and it could turn the whole coin-operated game business around.

Surely, after 50 years we are not going to sit by and *over*develop, *over*price, and *over*build our coin-operation business, and let it "go down the drain."

Let's slow down—catch up—and simplify the things that people want, or need, to make life more enjoyable. The "key" is that the coin-operated games offered to our customers be affordable to everyone, and something that they will buy over and over again!

Kallsen Retires, Sandler Takes Over As Executive Director of M.O.M.

One of the industrys most dedicated and effective state association Executive Directors, Martin Kallsen has retired as director of the Music Operators of Minnesota.

An industry veteran who served the state in every elected M.O.M. position, Mr. Kallsen took over the helm of the state association's offices after selling out his business several years ago.

However, the siren call of full retirement has opened up new possibilities for Martin and his wife, Irene. Their only regrets center around leaving Minnesota and the community of industry friends they have served so well.

Hy Sandler, another industry heavyweight, will take over the Executive Director position.

Hy has contributed on both the state and national level for years and has just left the AMOA Board of Directors effective with the New Orleans show.

Hy fully acknowledges the groundwork already laid down by Martin and looks forward to an orderly transition.

AMOA ALERT

Tennessee Legislation Shows Progress In Taxation

"In lieu of all other state and local taxes, fees or assessments of whatever kind, the owner of any coin-operated amusement device shall pay to the department of revenue a tax of one hundred dollars ($100.00) for each device owned for the privilege of operating, leasing, subleasing or consigning such device in this state."

That is the Tennessee law and represents one approach to the taxation of coin-operated amusement devices at the state level.

The law is specific in that the $100.00 tax is a substitute for all taxes including Gross Receipts, personal property and all other local taxes (some counties imposed their own tax on amusement devices). Operators know exactly where they stand under these provisions because they can look to the one law for compliance and clarification.

Tax stamps are issued as evidence of payment of the tax and under the law are transferable to other amusement devices of the same owner. Penalty for non-compliance is 10% of the amount of tax due and interest at the rate provided by law for delinquent taxes.

The Tennessee legislation represents progress in the area of taxation of coin-operated amusement devices. That progress was made through the efforts of the Amusement and Music Operators of Tennessee and Tom Jackson. This Tennessee effort and end result brings some degree of coherence to the taxation process of coin-operated amusement devices and we alert others to that fact.

The AMOA office has a copy of this Tennessee legislation. Write if you want a copy.

Connecticut Video Lottery Turned Down

The Connecticut Attorney General has turned down a request by game manufacturers to install video lottery game machines statewide.

Similar proposals raised two years ago in New York and Massachusetts were also denied, after critics insisted the units were too similar to slot machines.

Last September, Connecticut Public Safety sub-committee members witnessed demonstrations of lottery units and lottery game manufacturers were quoted as estimating that the state could earn between $70 and $130 million a year in additional revenue, had the machines been installed in bars statewide.

A spokesperson for the Music Operators of Connecticut Association stated operators are pleased with the decision, saying that such a video lottery could possibly put videogame operators out of business.

Oregon Adopts Depreciation Schedule

The Oregon Department of Revenue recently adopted a depreciation schedule for use in valuing amusement devices for the purpose of personal property taxation. The move came after extensive work by the Oregon Amusement and Music Operators Association.

The schedule for amusement device equipment on register as of January 1, 1984, provides for the following valuations:

YEAR 1—85% of original price
YEAR 2—20%
YEAR 3 and after—10%

This schedule applies only to amusement devices. Pool tables and jukeboxes are not valued under this section.

In early 1983, the Oregon Amusement and Music Operators Association appointed a special committee to work on the industry's behalf with the Oregon Department of Revenue. After almost a year of work, the department adopted the new schedule.

The committee compiled various statistics and information from industry sources to aid the Revenue Department. After working through the information, relating primarily to amusement device sales, the department agreed with the committee that the schedule would further the operators' interests, along with theirs.

Through the direction of the Revenue Department, county assessors are to follow this schedule, which should save Oregon operators thousands of dollars.

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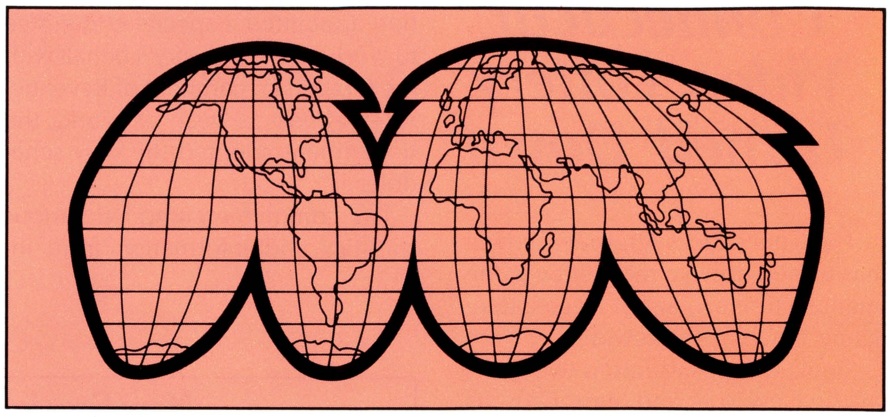
CIGARETTE VENDING

CIGARETTE AND TOBACCO TAXES: Twelve states increased their cigarette tax rates: **Arkansas,** from 17.75 to 21 cents a pack, effective March 10; **Connecticut,** from 21 to 26 cents a pack, effective August 1; **Kansas,** from 11 to 16 cents a pack, effective July 1, with the proviso that if the federal tobacco tax increase is repealed, as scheduled, October 1, 1985, the state tax will rise on that date to 24 cents; **Maine,** from 16 to 20 cents a pack, effective September 23; **Massachusetts,** from 21 to 26 cents a pack, effective July 11; **Montana,** from 12 to 16 cents a pack, effective July 1; **Nevada,** from 10 to 15 cents a pack, effective July 1, 1983, through July 1, 1985; **New Hampshire,** from 12 to 17 cents a pack, effective August 15 (this increase had been contingent on Vermont increasing its cigarette tax); **New Jersey,** by operation of its variable-rate tax, from 24 to 25 cents a pack, effective July 1, **New York,** from 15 to 21 cents a pack, effective April 1, 1983, through March 31, 1985; **North Dakota,** from 12 to 18 cents a pack, effective April 1; and **Vermont,** from 12 to 17 cents a pack, effective August 15.

In addition, five states continued for an indefinite time increases that had been temporary: **Iowa, Nebraska, Oregon, Washington,** and **Wisconsin.** Nevada imposed a tax of 30 percent of wholesale price on tobacco products, and Washington State continued indefinitely the previously temporary increase in its tobacco-products tax rate. ■

INTERNATIONAL



Talks of World's Largest Kiddie Ride Company to Form in U.S.

At press time, the LOCATION was informed that negotiations were underway to explore the idea of a merger between R. J. Newborough, England, and Elektro-Mobiltechnik, West Germany, to form the biggest kiddie ride company in the world.

If an agreement is met between the two companies, the new corporation would be based in the U.S., offering over 125 different rides to the U.S., Canada, Mexico, Central and South America, as well as the Caribbean.

Company heads, Roger Newborough and Wayne McKnight of R. J. Newborough and Jean Corzani of Elektro-Mobiltechnik, would remain equal partners in the venture, setting up headquarters at Largo, in Florida.

Talks include the possibility of having a salesman in every U.S. state and the hopes of renting out between 500 and 1,000 rides from the Largo warehouse, the first year.

The five distributors that carry the two companys' kiddie rides now in the U.S., would retain their distributorship should the new bigger company be formed, along with franchises becoming available to operators under a limited partnership agreement.

Japan Plans New Law for Protection of Computer Software

Reports into the AMOA National Headquarters indicate that Japan will enact the world's first independent Program Rights Law this year to protect computer software and facilitate its development while taking steps to ensure computer security, government officials said recently.

They said the Ministry of International Trade and Industry (MITI) hopes to complete preparatory work for the new law by mid-March to submit it to the Diet (Japan's equivalent of the U.S. Congress) for approval.

A set of recommendations for ensuring legal protection of software and computer security was presented to MITI by a panel of 24 advisors.

The information industry committee of the Industrial Structure Council, and advisory body to the MITI minister, proposed a Program Rights Law in light of software's growing role in Japanese society and legal battles over software. The LOCATION will continue tracking this story and provide appropriate up-dates.

Malaysia Formalizes Ban

The country of Malaysia has officially banned all public use of videogames.

Arcade owners in Kuala Lumpur, the Capital City, are particularly hard hit since the ban also forbids exporting equipment already in the country and most standing pieces have been held up in the distribution conduit coming in and out of the city.

Major factors in the ban, according to outside observers, are the social and cultural problems posed by the games' popularity in what is essentially an Islamic country.

Published estimates place the number of games affected at around 2,500, most of which had been withdrawn months before the ban became 'de facto' law.

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FLORIDA AMUSEMENT VENDING ASSOCIATION
March 15-18
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APRIL

AMOA MID-YEAR BOARD MEETING
April 29-May 2
Hyatt Regency
San Antonio, TX

MAY

OHIO MUSIC & AMUSEMENTS ASSOCIATION
May 3-5—Hyatt Regency
Columbus, OH

NORTH DAKOTA COIN MACHINE OPERATORS ASSOCIATION
May 11-12
New Sheraton Hotel, Main & 7th Street
Bismarck, ND

WISCONSIN AMUSEMENT & MUSIC OPERATORS
Trade Show, May 11-13, Americana Resort (on Hwy. 50)
Lake Geneva, WI

EDUCATION PROGRAM, 1984

Contact AMOA for details

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Session I—March 4-7
Session II—October 7-10
Session III—April 8-11
Session IV—November 11-14

UP-TO-DATE BY EAR

Information. A barrage of it. And it is just not possible to find time to read it all. Recognizing this problem, AMOA has instituted a service that offers an alternative; Educational Seminars on cassette. Immediately, current trends and developments are available to you.

The following courses are now available only through AMOA. Look the list over and use this order form to reserve your choice. (Include payment with your order)

_____ **PROFIT PLANNING THROUGH ANALYSIS**

Manly Lawson, Lawson Music Co., provides a useful review of the basics of profit planning using analysis. The following topics are explored: (1) overhead; (2) realistic fixing of direct expenses: (3) figuring real depreciation; (4) allocating replacement costs. Wally Bohrer, Jr., Hastings Distributing, continues with an outline of the relationship between growth and survival.

_____ **INTRODUCTION OF COMPUTERS AS THEY APPLY TO BUSINESS MANAGEMENT**

Software, hardware, floppy discs, hard discs, processors, printers. How do you decide? When do you decide? If you are shaking your head already then Peter Mataya from IBM provides an understandable primer on shopping for the right equipment.

_____ **TECHNICAL SEMINAR: SIGNATURE ANALYSIS FOR MICROPROCESSORS/SEMINAR**

J. W. Sneed, Jr., Gen. Mgr., Electronics Div., KurzKasch, Inc. A good review of test equipment and procedures for repair of electronic machines.

_____ **CIGARETTE TAXES AND VEHICLE COSTS**

Bruce Hatter, R.J. Reynolds Co.; Alan Bershad, Penn Regal Vending Co.; Jack Kerner, Melo-Tone Vending; Robert W. Singer, Pres. B&F Amusements. Covers topics of: (1) how you can use services of major companies for demographics, brand placement and promotion; (2) inventory control; (3) security and (4) reducing fuel costs.

_____ ***COMPUTERS: ARE THEY FOR YOU OR AREN'T THEY? WHAT TO DO TO MAXIMIZE THEIR USE IF YOU GET ONE. AN OPERATOR'S VIEW/ 2 Tape Set**

Robert Baker, V.P., Melo-Tone Vending, Inc., Massachusetts; Manley Lawson, V.P., Lawson Music Co., Florida; and Dock Ringo, Ringo & Ball, Texas. How do you determine if there is a cost justification for a computer? What to watch for in selecting and installing a computer; batch vs. on line installations; and most effective use of a computer in a Music and Games company are only highlights of this operator view program.

_____ **HOW STATE/LOCAL ASSOCIATIONS CAN PRODUCTIVELY ADDRESS THEIR PROBLEMS.**

Hotlines? Membership Drives? Priorities—and funding them? PAC's? "What works and why" is the theme of this Industry Seminar moderated by John Estridge, Past President of the Amusement & Music Operators of Tennessee with a three member panel of Richard George, President of Ohio Music and Amusements Association, Norman Pink, Past President of the Music Operators of Minnesota and Paul Corey, Executive Vice President of the Ohio Music & Amusement Association.

_____ **FAMILY ORIENTED AMUSEMENT CENTERS**

The operator's operator, Barry Kane, Director of Amusement Center Operations for Advance Carter Co. of Minneapolis will analyze the A to Z of developing an Amusement Center location. His discussion will cover what must be considered in layout, how to hire and who to hire and even how to set up in-house training programs. In addition, Mr. Kane provides an insight into setting up a system for cash controls from within and how to select the right games and right game mix to appeal to all members of a family. Mr. Kane's session is followed by a question and answer period.

_____ **OPERATING A SUCCESSFUL ARCADE—THE GUIDELINES**

Don Van Brackel, A. Van Brackel & Sons, Ohio moderates this discussion developed by Lee Melchi, of Jack F. Eiser Sales Co., Inc., Indiana and Jack D. Kerner of Melo-Tone Vending, Inc., Massachusetts. This is a "nuts and bolts" seminar that covers the range from what to avoid to what to do, how to develop a high profit while maintaining good community relations and the reducing of potential for local restrictions through effective preplanning.

_____ **PINBALL MERCHANDISING: AN ALTERNATIVE**

This seminar will give you the insight needed to tap the market potential of an old standby that is building a new audience. The moderator of this seminar is Tom Nieman, Bally-Midway Mfg., Franklin Park, IL. The panel will consist of Bernie Powers, Bally's Aladdin's Castle, Chicago, IL; Sharon Harris, Stan Harris & Co., Inc., Philadelphia, Pa; Joe Kaminkow, Williams Electronics, Chicago, IL; Jack Hubka, Bally-Midway Mfg., Franklin Park, IL.

_____ **FUN CENTERS: A QUEST FOR IDENTITY AND STYLE**

An industry session drawing together some of the best in the business to directly address the planning, scope and need for imprinting a distinct identity on your current or planned Fun Center. 'Murph' Gordon from Aladdin's Castle, Chicago; Tom McAuliffe of Time Out, Fairfax, VA; David R. Brown, President of Bullwinkle in Santa Clara, CA and Tony Urso of Madison Coin Machine Company, Monona, WI panel this program.

_____ **BENEFITS**

When was the last time you understood your's or your employees' benefits package? When was the last time you explored alternatives? Time consuming wasn't it! To help you and your employees understand the alternatives, this tape presents Russ Stewart, President of Benefit Consultants, Inc., Indianapolis, IN, who reviews the alternatives for you—including a few you may never have thought of.

_____ **ARE YOU PAYING THE IRS TOO MUCH?**

This program examines ways to reduce your tax burden by using the rules as set forth by the IRS to your advantage. It is not too late to plan for 1984 or too early to think about 1985. Conducted by tax authority James L. Harfield, of Blackman, Kallick & Company, Ltd.

_____ **STRATEGIC PLANNING FOR THE 80's**

History proves that the operator who plans ahead stays ahead. This operator panel identifies many of the crucial factors in strategic planning that every operator must consider now. Vincent Storino, S & S Amusements Company, Toms River, NJ, moderates a panel made up of Ralph Trotta, City Amusement Company, Fairlawn, NJ, Don Abrams, Eskin Vending, Oldbridge, NJ, and Victor Scola, Arco Amusements, Ocean City, NJ.

_____ **THE HOW TO OF A POOL LEAGUE**

This tape by Chuck Milhem, President of Valley Company and Gary Benson from D & R Novelty, Inc., Rochester, MN should help pave the way to your successful pool league.

_____ **LASER-DISCS: FRONT & CENTER/OVERVIEW OF OPTICAL VIDEO-DISC TECHNOLOGY—A SERVICE PERSPECTIVE**

John Browne of Pioneer Inc., presents a program designed to give operators, distributors and technicians some understanding of the theories behind the new technologies of CED & Laser systems.

_____ **ARE YOU COMPUTERIZING FOR THE RIGHT REASONS?**

Industry Computer expert, Manley Lawson, Lawson Music Company, Inc., moderates this panel. No matter where you are on the "Computerize or not to Computerize" question, this discussion is geared to resolve problems and to help you make the decision that is right for you. Joining Mr. Lawson will be Ted Furkin of Allstar Music and Paul Borchardt of Borchardt Coin Machine.

_____ **STATE ASSOCIATION MEETING**

Moderated by Russell Mawdsley, Russell-Hall, Inc., Massachusetts, this is a block buster presentation by the AMOA State Association Committee. The first hour reviews the status of current state/local associations while the second hour is packed with presentations on:

(a) "APPRENTICESHIP EDUCATION PROGRAMS" by Joe Phillips, Executive Director of the Wisconsin Amusement and Music Operators.

(b) "HOW TO GET THE MAXIMUM OUT OF YOUR STATE CONVENTION" by Robert S. Rhinehart, Executive Director, Florida Amusement Vending Association.

(c) "FUNDING YOUR STATE ASSOCIATION BEYOND MEMBERSHIP DUES OR ASSESSMENTS", presented by Jack Kerner of Melo-Tone Vending, Somerville, MA.

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WHY THE LOCATION?

As the official voice of the Amusement and Music Operators Association, THE LOCATION is a magazine operators identify with, consult, and save. A majority of the readers are owner operators from all parts of the United States, Canada and 22 other foreign countries and territories. The editorial content of THE LOCATION is devoted entirely to industry information and issues. Peer written and reviewed, THE LOCATION provides an up-to-date forum of practical, thought-provoking articles designed to meet the membership's needs for relevant information.

THE LOCATION seeks to foster knowledge of the coin-op amusement profession through the publication of survey results, technical articles, research, and timely news.

AMOA operator members are the most powerful block of buyers in this industry—controlling well over half of all videogame equipment as well as over 500,000* additional pieces of coin-op equipment.*

We hope you enjoy THE LOCATION and find its articles useful.

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